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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,134	03/24/2004	Fredrick B. Jenne	5298-17100 SMS03003	7719

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EXAMINER	
LE, THONG QUOC	

ART UNIT	PAPER NUMBER
2827	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/809,134	JENNE ET AL.	
	Examiner	Art Unit	
	Thong Q. Le	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4 and 7-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *25-27* is/are allowed.

6)☒ Claim(s) *1,3,8,9,13-16,18,19 and 21-23* is/are rejected.

7)☒ Claim(s) *4,7,10-12,17,20,24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Amendment filed on 01/17/2006 has been entered.

2. Claims 1,3-4,7-27 are presented for examination.

Response to Arguments

3. Applicant's arguments with respect to claims 1,3-4,7-27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1,3,8-9,13-16,18-19, 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Bessho et al. (Pub. No. U.S. Patent No. 2004/0233755).

Regarding claim 1, Bessho et al. disclose a magnetic random access memory device (Figure 8), comprising:

an array of magnetic elements (Figure 8, 2);

a plurality of conductive lines (Figure 8,4) configured to set magnetization states of the magnetic elements ([0067]); and

circuitry (Figure 8, 6) configured to independently vary aspects of current applications along one or more of the conductive lines ([0088],[0093]) , wherein the aspects comprise at least one of an amount of current applied to the one or more conductive lines (Figure 9, [0092-0096]) ; a point in time at which current is applied to the one or more conductive lines (Figure 9, ([0072]) ; and a length of time current is applied to the one or more conductive lines (Figures 5, time).

Regarding claim 3, Bessho et al. disclose wherein the circuitry is configured to vary the amount of current with respective to the direction along which the current is applied (Figure 5, 0<I> 0, I = 0).

Regarding claims 8-9, Bessho et al. disclose wherein the circuitry is configured to vary current applications for write operations of the magnetic random access memory device ([0068-0072]), and wherein the circuitry is configured to vary current applications for read operations of the magnetic random access memory device ([0005], [0009-0011]).

Regarding claim 13, Bessho et al. disclose a device (Figure 1), comprising a magnetic random access memory (MRAM) array (Figure 1, 2); and a first storage circuit

(Figure 1, 5, [0039]) distinct from the MRAM array, wherein the first storage circuit comprises one or more magnetic elements ([0036-0038]).

Regarding claim 14, Bessho et al. disclose wherein the first storage circuit is configured to store, within the magnetic elements, parameter settings characterizing applications of current to operate the magnetic random access memory array ([0039], Figure 5, recording state).

Regarding claim 15, Bessho et al. disclose wherein the parameter settings are settings selected for use by a customer of the device (Figure 5, recording state is used by a customer, [0061-0065]).

Regarding claim 16, Bessho et al. disclose wherein the parameter setting are settings selected for testing qualitative features of the magnetic random access a memory array ([0061-0068]).

Regarding claim 18, Bessho et al. disclose a circuitry configured to vary one or more values of the parameter settings during an operation of the magnetic random access memory array (Figure 8, 6, [0088]).

Regarding claim 19, Bessho et al. disclose a magnetic random access memory device (Figure 1) comprising an array of magnetic elements (Figure 1, 2) ; a plurality of conductive lines (Figure 1, 3,4) configured to set magnetization states of magnetic elements (Figure 8) ; and circuitry (Figure 8, 6) configured to terminate an application of current one or more of conductive lines before magnetic states of one or more magnetic elements selected for a write operation of the device are changed (Figure 5, word line current, bit line current and recording state, [0005]).

Regarding claims 21-23, the apparatus discussed above would perform the method in claims 21-23.

Allowable Subject Matter

6. Claims 4, 7, 10-12, 17, 20, 24, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4, 7, 10-12, 17, 20, 24 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Bessho et al. (U.S. Patent No. Pub. U.S. Patent No. 2004/0233755), and others, does not teach the claimed invention having a circuitry is configured to vary amount of current with respective to the temperature of the magnetic random access memory device as claim 4 disclosed, and wherein the circuitry is configured to apply a write pulse current along one or more of the conductive lines for a length of time sufficient to allow a source current to be measured from a voltage power supply coupled to the magnetic random access memory device during the application of the write pulse current as claim 7 disclosed, and wherein the circuitry is further configured to vary an amount of bias voltage applied along a different conductive line comprising a gate of a transistor coupled to one of the magnetic elements as claim 10 disclosed, and wherein the circuitry is further configured to terminate the current applications upon determining a power level supplied to the magnetic random access memory device is below a predetermined threshold as claim 11 disclosed, and a

reprogrammable non-volatile latch which is distinct from the array of magnetic elements and configured to store parameter settings for the current applications as claim 12 disclosed, and a second storage circuit having one or more magnetic elements, wherein the second storage circuit is configured to send a control signal by which to select the first storage circuit or the alternative means to send the parameter settings to the magnetic random access memory array as claim 17 disclosed, and terminated the application of current upon determining the voltage level is below a predetermined threshold as claim 20 disclosed, and a method applying a current along a bit line coupled to the magnetic element for more than approximately 50ns as claim 24 disclosed.

Claims 25-27 are allowed.

Claims 25-27 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Bessho et al. (U.S. Patent No. Pub. U.S. Patent No. 2004/0233755), and others, does not teach the claimed invention having a method including classifying the magnetic element as unsatisfactory determining the difference is less than a predetermined level.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarabian Amir can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Q. Le
Primary Examiner
Art Unit 2827

3/22/2006